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ABSTRACT

Alaska will face a large fiscal gap and growing budget deficits in the near future. The timing of such fiscal gap open hinges on the joint effect of state budget growth and the oil price change. This paper explains Alaska's dependence on state spending and offers policy options addressing the fiscal gap. State spending: (1) supports nearly one in two local government jobs (including school district jobs); (2) supports more than one in four private sector jobs; (3) accounts directly or indirectly for nearly one in three of all jobs; and (4) accounts for three dollars in ten dollars of all personal income. State cash payments to individuals or state payments under medical aid programs are financed by 1 out of every 13 dollars of personal income. State spending effects regions of Alaska differently; however, the Southeast and Rural Interior are particularly dependent upon state spending for economic activity. Policy options addressing the fiscal gap are described in terms of job effects, income effects, and public spending effects. Options are proposed for dealing with the problem, namely: (1) across-the-board cuts; (2) reduce employee costs; (3) income tax; (4) increase return on Permanent Fund; (5) use dividends in general fund; (6) combine sustainable options; (7) no inflation proofing. This paper contains numerous tables, graphs, and charts. (KS)

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ISER
FISCAL POLICY PAPERS

No. 5, October 1990

Institute of Social and Economic Research University of Alaska Anchorage

Alaska's Dependence on State Spending

It would be hard to exaggerate Alaska's economic dependence on state government spending. State spending supports nearly one of every three jobs. Three of every ten dollars of personal income grow out of state spending.

So it's easy to see why state officials need to be sensitive to the economic effects of measures they take to fill the looming fiscal gap. The state faces big and growing budget deficits. Declining petroleum production in the coming years will sharply reduce petroleum revenue, which supplies 85 percent of the state's income. If state officials balance the budget entirely through spending cuts, economic growth could slow dramatically over the next decade, costing Alaska 35,000 new jobs.

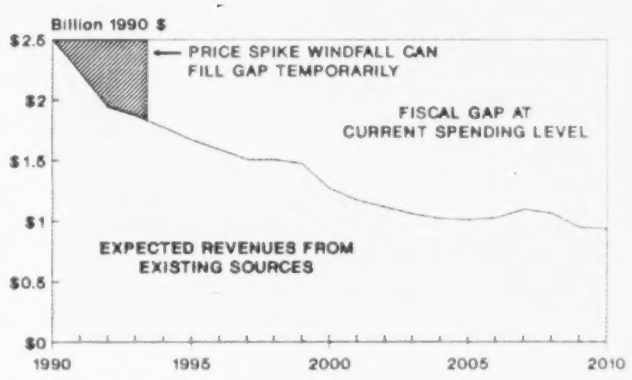
We can't avoid the economic slowdown that the fiscal gap will produce, but we can help ease its effects by a combination of more efficient use of our assets, spending cuts, cost containment, and new taxes or other new revenues. This paper analyzes how different state fiscal policies could reduce economic disruption from the fiscal gap in the coming years.

Of course the state's main goals in managing the fiscal gap should be to bring state spending to a level Alaska can sustain over the long term, and to provide those services Alaskans want and are willing to pay for. But in working toward those goals, state officials should also bear in mind the substantial economic effects that will accompany changes in state spending.

And when will the fiscal gap open? That's very uncertain. Just three months ago, it looked as if the fiscal gap might already be here, with the state government facing a possible budget deficit in the current fiscal year of hundreds of millions of dollars. But the state is getting a fiscal reprieve because the current Middle East crisis has temporarily doubled oil prices.

Figure 1 shows how the fiscal gap would be affected if oil prices averaged $30 per barrel through June 1991, and then returned to an average of $16 per barrel (in 1990 dollars). The state would collect enough to fully fund this year's budget and a $1.3 billion windfall that could be used to maintain real (adjusted for inflation) spending at $2.5 billion until fiscal year 1994.

Figure 1. Projected Fiscal Gap At FY1991 Budget Level With Potential Contribution From Oil Price Spike



Revenues include settlement windfalls. Oil price averages $30 per barrel through June 1991 then returns to $16 per barrel.

This is the fifth in a series of ISER Fiscal Policy Papers examining state government revenues and spending. We intend the papers to focus the attention of state officials and other Alaskans on the fiscal crisis in Alaska's future. The primary author is Scott Goldsmith, professor of economics at ISER. Other contributors include Lee Gorsuch, ISER director; and Alexandra Hill, Linda Leask, and Monette Dalsfoist, also of ISER. The series is financed by a grant from ARCO Alaska.

After that a wide gap could open, starting at around $500 million in fiscal 1994. That is $100 million higher than we projected in earlier papers, because the current budget is $100 million higher than last year's, after adjusting for inflation. By the year 2000 the gap could reach $1.2 billion.

If current prices don't last through next June, or if they last longer, the opening of the gap could move closer or further away. But when the gap starts also depends on the size of the state budget: higher state spending would move the gap closer, even at higher oil prices. The box at the bottom of the page shows how different oil prices and different rates of state budget growth would change the start of the fiscal gap.

Figure 1 is based on current state spending of $2.5 billion annually. The Alaska Legislature first appropriated $2.8 billion for the fiscal year 1991 budget (not including appropriations from the Railbelt Energy Fund). Governor Cowper then vetoed $325 million because of a then anticipated budget deficit. Now there is pressure to reinstate the vetoed items because of the anticipated substantial budget surplus.

Whatever happens to oil prices in the next few months, we shouldn't be distracted from dealing with Alaska's underlying fiscal problem: the need to plan now to minimize the fiscal and economic troubles we will inevitably face as a result of declining petroleum production and shrinking petroleum revenue. This paper aims to help with that planning.

We first describe just how important state spending is to Alaska's economy and to regional economies within the state, and then analyze options for reducing the economic effects of the future fiscal gap.

Changing Prices and Spending

The current Middle East crisis is giving Alaska a fiscal reprieve that comes at a high price (in many respects other than financial) to the U.S. and the rest of the world. We don't know when the crisis will end, or how long oil prices will stay up. At this point the safest assumption is that the current price spike will be temporary, and that ultimately oil prices will drop from above $30 per barrel back to the range of $15 to $20 per barrel, where they have been for most of the past 5 years.

But if war broke out in the Middle East and further disrupted oil supplies, prices could temporarily go even higher, or remain high longer. To attempt to show the range of outcomes this situation creates for the State of Alaska—and to account for the fact that higher oil prices tend to stimulate budget growth—we developed the figure below. It shows how the opening of the fiscal gap would be shifted if oil prices stayed at their current level through June 1991, giving the state a $1.3 billion windfall, and then stabilized at some given level for varying rates of budget growth. We assume a rate of decline of 7 percent annually in petroleum production.

Very high oil prices and little or no growth in the state budget would delay the gap the longest, possibly by 10 years or more. Oil prices in the pre-crisis range and fast growth in the budget would bring on the gap almost immediately. If oil prices were to fall to the pre-crisis range by June 1991 and the budget were held constant, the gap would begin within 3 years.

How to Read the Graph

Pick an oil price from the horizontal axis and a rate of budget growth from the vertical axis. Read up from the oil price and right from the growth rate. Where the two lines intersect shows the year the gap would open. For example, if oil prices stabilized at $20 per barrel and the budget grew 6 percent annually, the gap would open in 1995.

Our budget base is $2.5 billion. For this analysis, we assume that the oil price averages $30 per barrel until June 30, 1991. This creates a surplus of $1.3 billion in FY 91 which is saved and used to offset declining revenues in subsequent years. Without this surplus, there would be a fiscal gap this year (FY 91). Starting in FY 92, the price is at the level shown on the X-axis of the graph.

To do this analysis we have to make assumptions about oil prices and budget levels, despite the current uncertainty. Our findings are based on oil prices holding at or near their current levels through mid-1991 and then dropping back to an average of $16 per barrel (in 1990 dollars), and real (adjusted for inflation) state spending holding at $2.5 billion annually. These assumptions give us a good idea of the magnitude of the problem Alaska faces, even though future conditions will undoubtedly be somewhat different from those we assume.

How Important Is State Spending?

In this paper we measure the economic importance of state spending to Alaska's economy through the jobs and income it directly and indirectly creates.*

Pumping money into the economy—by hiring workers, for example—directly creates jobs and income (mostly public; however, during the 1980s Alaska elected to contract with the private sector for some goods and services, thereby directly creating jobs in the private sector). Hiring state workers also indirectly creates additional jobs and income in the private sector when state employees spend their paychecks. Economists call that additional effect the **economic multiplier**; the box on the right defines the multiplier used in this paper. It's important to keep in mind that any kind of economic activity has effects beyond the obvious direct ones—and that eliminating any given activity eliminates not only its direct but also its indirect effects.

Before we move into our analysis, we want to make several points. First, government activities other than spending also influence the economy. Government subsidies, resource management, laws and regulations, and taxes are some of these. We don't examine the effects of any of these other kinds of government activities, but we recognize that they're also important.

Also, some analysts argue that reduced public spending boosts private economic activity. That argument assumes less government spending results from tax cuts or other changes that leave more income and thus more purchasing power in private hands. But that assumption doesn't apply in this case. The drop in state government spending we're describing will result from reduced petroleum revenues, not from tax cuts or other changes in government policy. Reduced petroleum revenues will mean a drop in total income in the economy—not a shift of income from government to private hands.

Finally, people disagree about how to assess the "benefits" of government. Many believe the benefits of government are in the services it provides; others measure the benefits through the jobs government creates by providing services. By describing how many jobs and how much income state spending supports in Alaska we're not arguing that jobs or income should be the

Economic Multipliers and Bang Per Buck

The total economic effect of state government spending—or of any other kind of spending—is always greater than the direct effect. That's because when individuals and businesses re-spend the money in the economy, they multiply its original value.

In this paper we estimate the total (both direct and other) effects of state spending on Alaska employment and income by using an ***income multiplier*** of 1.35. This means that for every $1 of income Alaskans obtain directly from state spending, an additional 35 cents of income is created in the economy when the recipients re-spend the $1.

Different kinds of spending have different economic multipliers, depending on how much of each dollar spent leaks out of the economy with each transaction—that is, how much doesn't re-circulate in the economy for some reason. Money might, for example, leak out of the economy because it was paid to businesses outside Alaska or to non-resident workers or to the federal government in taxes. The 1.35 income multiplier we're using here takes into account such leaks out of the economy.

Although we have not done so in this paper, it is also possible to calculate the ***bang per buck*** for government spending. The bang per buck is the total employment or income created when government spends $1. Like the multiplier, the bang per buck will vary depending on how the $1 is spent. Some spending has bigger employment effects and some bigger income effects. For example, spending $1 to expand public employment has a bigger employment bang per buck than spending $1 for cash payments to individuals. That's because the $1 spent for wages creates both direct public employment and indirect private employment when government employees spend their wages. The cash payment to an individual, on the other hand, creates employment only indirectly, when the individual spends his money.

**When we say "indirectly" here and later we are using the word in its broad, general sense to include all the kinds of economic effects that are not direct. Technical economic usage distinguishes "indirect" and "induced" effects.*

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criteria used for judging or justifying state programs. We're simply using those measures to assess the economic effects of state spending, and to make plain Alaska's heavy dependence on state spending.

Figures 2, 3, and 4 show ISER's estimates of the statewide and regional economic importance of state spending. When we refer to "all jobs" we are including jobs in the military and self-employment as well as wage and salary jobs. (A box on page 16 describes the methods used in calculating these estimates.) Map 1 shows the geographic boundaries of the regions we're using.

Figure 2 shows:

• *One in thirteen working Alaskans gets a paycheck from the state government.* About 19,000 Alaskans worked either for state agencies or the University of Alaska in 1988. State government jobs strongly influence the Alaska job market. Because state jobs are generally well-paid, non-seasonal, and carry good benefits, they are among the most attractive jobs in Alaska. Other Alaska employers have to compete with what the state government offers.

• *Nearly one of every two local government jobs (including school district jobs) in Alaska is supported by state money.* That represented about 12,500 jobs around the state in 1988. All local governments in Alaska depend heavily on state money, even though state aid declined in the late 1980s.

• *More than one in four private sector jobs in Alaska depends on state spending.* In 1988 that amounted to about 50,000 of a total 170,000 private sector jobs (which included both those who worked for wages and salaries and those who were self-employed). Some industries, like construction, depend directly on state spending, while many others feel its influence indirectly.

• *Nearly one in three of all Alaska jobs (both public and private) depends directly or indirectly on state spending.* That amounted to more than 80,000 of Alaska's 259,000 total jobs in 1988. The total includes all state government jobs; local government jobs supported by state transfers; construction jobs created by state capital spending; other private jobs created by state purchases of equipment, commodities and services; and additional private jobs created when Alaskans re-spend their state wages or cash payments in the economy.

• *One of every thirteen dollars of Alaska personal income consists of state cash payments to individuals or state payments under medical aid programs.* The state makes direct cash payments to Alaskans under the Permanent Fund dividend program, the Longevity Bonus program, the Aid to Families with Dependent Children (AFDC) program, and other welfare programs. It also pays hospitals and doctors for medical services for Alaskans covered under Medicaid and other medical aid programs. We consider such payments as contributing to personal income because they effectively increase income of individuals by paying for medical care they couldn't otherwise afford.

State payments to individuals and to medical care providers totaled more than $800 million in 1988. The Permanent Fund dividend program and the Longevity Bonus program together accounted for about two-thirds of that total.

• *Three of every ten dollars of personal income in Alaska can be attributed to state spending.* That amounted to about $3 billion of the total $10 billion Alaska households received in 1988. State spending creates personal income directly and indirectly through wages paid state workers and contractors; through cash payments to individuals under a number of programs; through purchases of goods and services from Alaska vendors; through the local government jobs state aid supports; and through spending by all those who initially collect state wages and other payments.

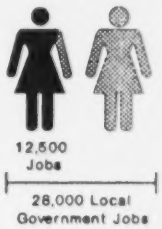
Figures 3 and 4 summarize ISER's estimates of the regional economic importance of state spending. Just as we're not suggesting that jobs and income are the appropriate measures of the benefits of public spending, we're not suggesting that the regional employment and income impacts of government spending should be used to assess the regional equity of public spending. The figures show:

• *The State of Alaska and its local governments (which rely heavily on state money) are major employers throughout the state.* About 47,000 Alaskans worked directly for state and local governments in 1988. Half of all state and local jobs are along the urban railbelt (where most of the population lives) and another 20 percent are in the southeast region (which includes Juneau, the state capital). Even in the sparsely populated rural areas, thousands of people hold state and local jobs.

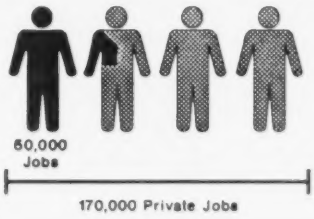
Figure 2. How Important Is State Spending?

State Government Jobs Account For 1 In 13 Total Jobs

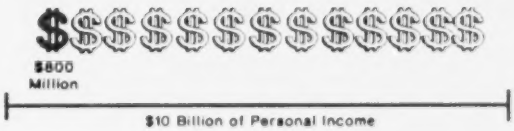
State Spending Supports Nearly 1 In 2 Local Government Jobs



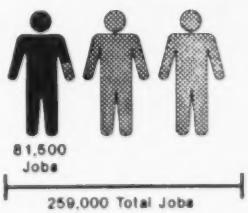
State Spending Supports More Than 1 In 4 Private Jobs



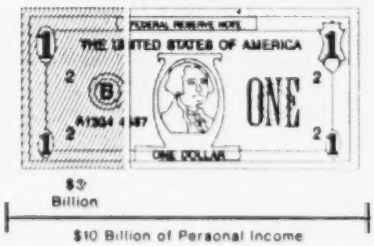
State Cash Payments Provide $1 In $13 of Personal Income



State Spending Accounts For Nearly 1 In 3 of All Jobs

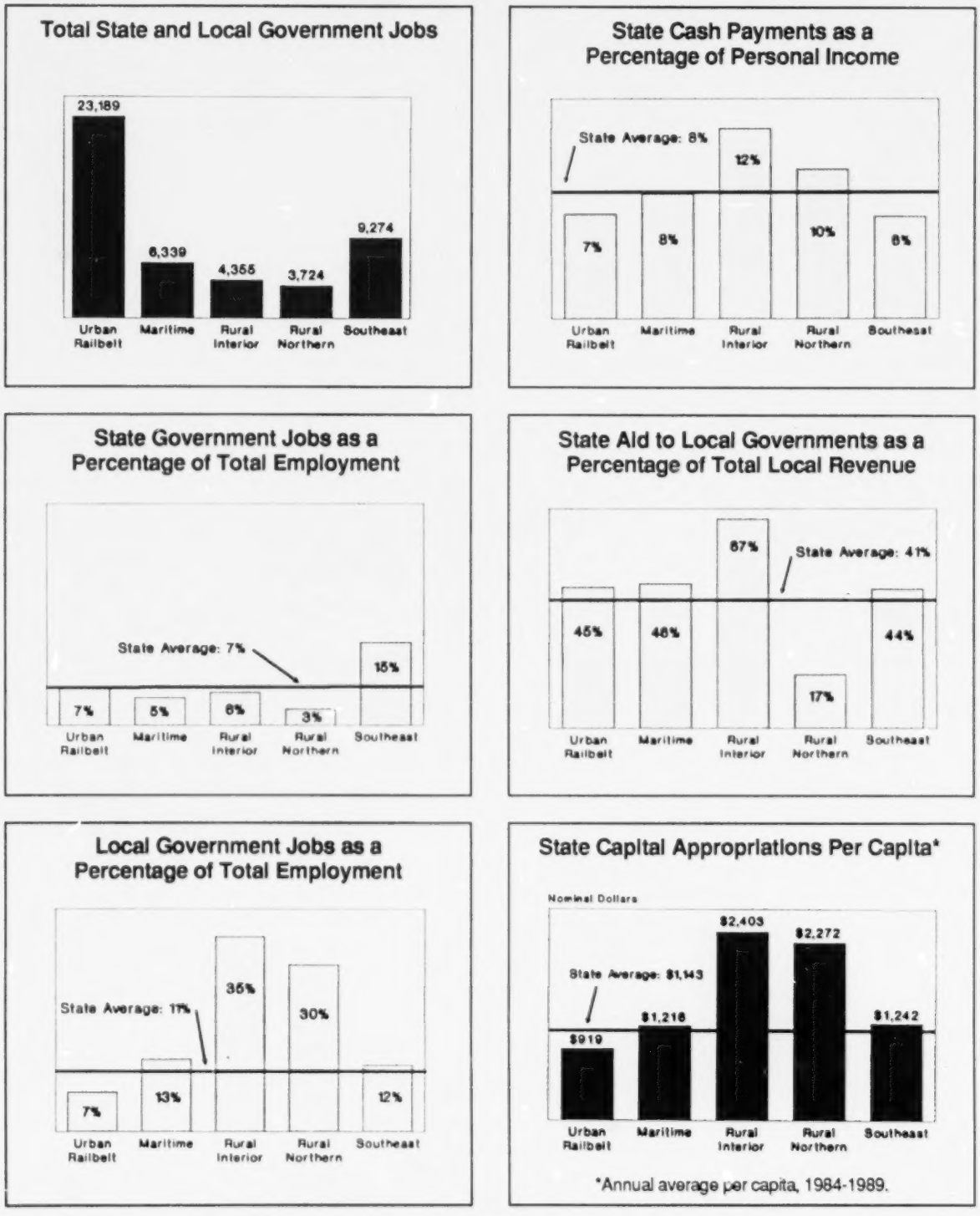


State Spending Accounts for $3 In $10 of All Personal Income



Sources for Figures 2, 3 and 4 are: Alaska Department of Labor; U.S. Bureau of the Census; U.S. Bureau of Economic Analysis; Legislative Research Agency, Report 90-A; and ISER calculations. Employment and income data are for calendar year 1988; state budget data are for fiscal year 1989. Methods of estimation are described on page 16.

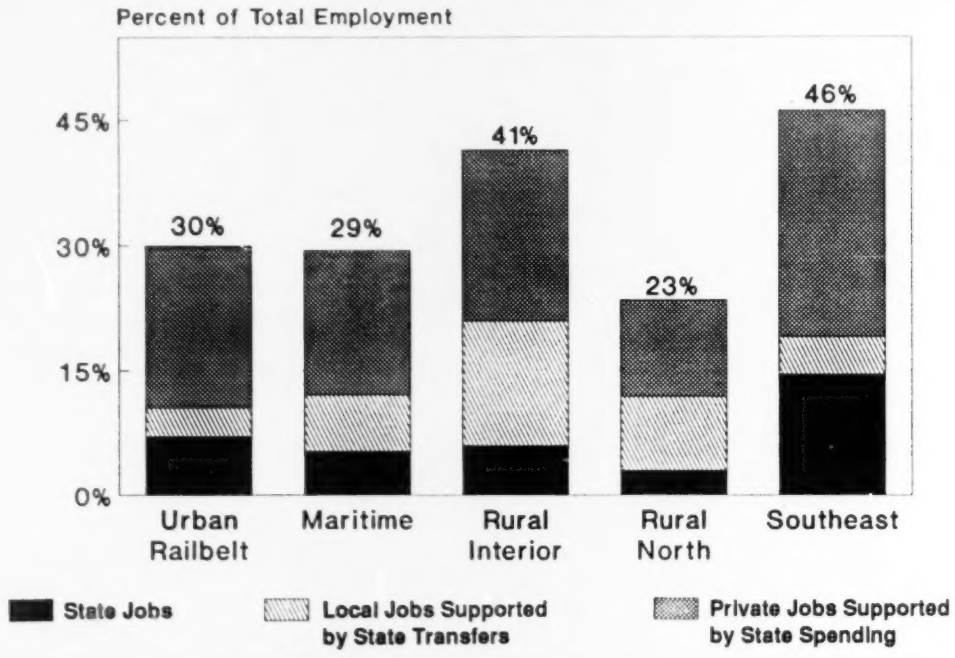
Figure 3. Regional Importance of State Spending



See sources for Figure 2. Employment and income data are for calendar year 1988 and spending data for fiscal year 1989. Methods of estimation are described on page 16.

Map 1. Geographic Boundaries of Regions

Figure 4. State Spending as a Percentage of Regional Economic Activity



See sources for Figure 2. Employment and income data are for calendar year 1988 and state spending data fiscal year 1989. Methods of estimation are described on page 16.

• *State government jobs are most important to total employment in southeast Alaska—which includes the capital—contributing one in seven, or 15 percent, of all jobs.* State jobs account for one in fourteen, or 7 percent, of jobs along the urban railbelt, with many residents of Anchorage and Fairbanks working for state agencies or the University of Alaska. In the more rural regions direct state employment makes up from 3 to 6 percent of all jobs.

• *Local governments (including school districts) are heavily supported by state aid and are crucial sources of jobs in rural Alaska. Local government jobs make up 35 percent of all jobs in the rural interior and 30 percent in the rural northern region.* Those are the areas where private jobs are most scarce. In the maritime region, which includes many jobs in the fishing industry, local government jobs still make up about 13 percent of all jobs. Even along the urban railbelt, 7 percent of all jobs are local government and school district jobs.

• *State aid to local governments (including school districts) accounts for nearly half of local government revenues in much of the state, and two-thirds of local revenues in the rural interior.* Only in the rural north do state transfers make up much less of local government revenue—just 17 percent. However, it isn't that the state gives that region less money than others; it's that the North Slope Borough (which covers the area north of the Brooks Range) has so much money of its own that state transfers make up a much smaller share. The borough collects hundreds of millions of dollars in taxes and other revenues from oil development around Prudhoe Bay.

Remember that these figures don't reflect the value of services the state provides directly. Especially in rural Alaska the state government directly provides services—like police protection—that local governments provide in other areas.

• *State cash payments to individuals and state payments for medical aid programs make up one in eight dollars (12 percent) of personal income in the rural interior, as compared with the state average of one in thirteen dollars (8 percent)* . (The earlier discussion of the statewide importance of cash payments describes what is included in this category.) State payments are very important sources of income in rural Alaska because there are few other sources.

• *Annual per capita state spending for construction projects from 1984 through 1989 averaged more than twice as much in the rural interior and northern regions as in the urban railbelt.* In those regions annual per capita spending averaged over $2,200 as compared with the state average of $1,100.

Part of the higher rural spending is due to the higher costs of construction in outlying areas. Part reflects differences in how public services are provided in urban and rural Alaska. For example, rural schools have historically been funded through state appropriations, while urban school districts have been reimbursed out of the state operating budget for a large share of school construction costs. Finally, part of the difference also reflects a state government decision to target rural areas because of their perceived greater need and their lesser ability to pay.

Typically, much less of the income from construction spending stays in rural areas than in urban areas, because in rural areas construction projects employ many non-resident workers who take their wages home with them when the job is finished.

• *State spending is responsible for 46 percent of all economic activity in the southeast region and 41 percent in the rural interior. It supports 30 percent in the railbelt, 29 percent in the maritime region, and 23 percent in the rural north.* Here we're gauging economic importance by the *estimated* percentage of total employment state spending supports in each region; precise allocations by region are impossible because of lack of complete information on the location of some state spending.

Figure 4 shows state government jobs, local government jobs supported by state spending, and private jobs created by state spending. Those private jobs are created in several ways: by the economic multiplier effects (defined on page 3); by transfers to individuals; by construction projects; by state purchases of commodities and services; and by spending for employee benefits.

The importance of state spending in the railbelt is enhanced by its function as the trade and service center for rural areas. The estimated percentage of economic activity supported by state spending is lowest in the rural north—but again, as we discussed earlier, in that region the North Slope Borough collects large revenues of its own and spends a great deal locally.

Reducing Fiscal Drag

We've just described how important state spending is to Alaska's economy today. It's obvious that whenever the fiscal gap opens and requires cuts from the current spending level there will be a drag on the economy. Slower economic growth will cost Alaska jobs and income it would otherwise have had.

Figure 5 shows how much difference the fiscal gap could make in future job growth. The top line of the figure shows a recent ISER estimate of how the number of Alaska jobs might grow between now and 2010, if there were no fiscal gap and if the state government were able to maintain real spending of $2.5 billion annually, at no new cost to the private sector.

In this example, private sector growth—led by growth in the petroleum, mining, and tourism industries as well as federal spending—could add more than 35,000 new jobs to the Alaska economy over the next decade and 48,000 more in the following decade. (These estimates do not include jobs that would be created if a gas pipeline were built or if there were petroleum development in the Arctic National Wildlife Refuge.)

But, by contrast, Figure 5 also shows how employment growth could be affected if the state closed the fiscal gap entirely through across-the-board budget cuts. Such a policy would be somewhat similar to the federal Gramm-Rudman law, which requires automatic across-the-board cuts if Congress is unable to agree on other methods of cutting the federal deficit.

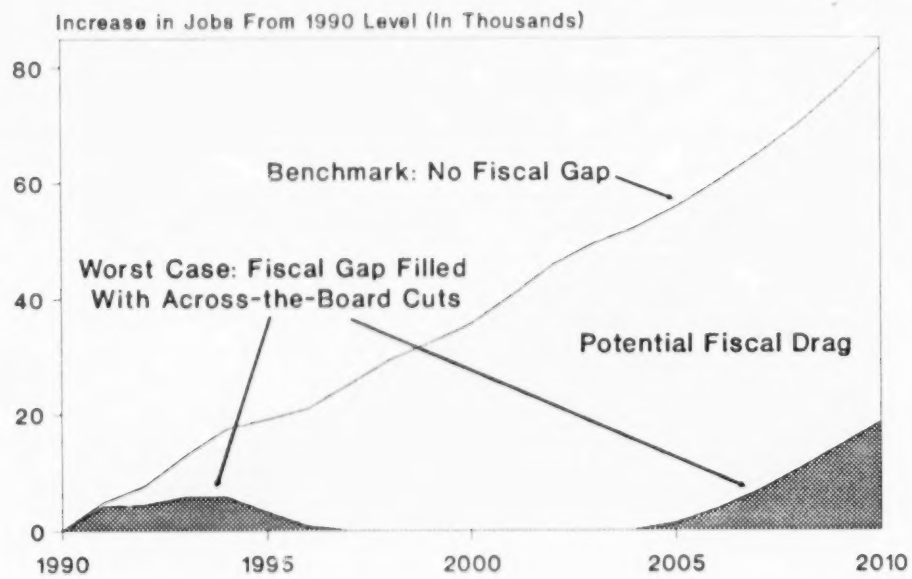
The State of Alaska couldn't strictly implement such a policy, because of federal commitments, bonded debt obligations, other constitutional obligations, and practical limitations. We are using this example simply as a "worst case" against which to measure more targeted responses to the fiscal gap.

In this example, moderate growth in the private sector could be completely offset by across-the-board state spending cuts over the next 10 years, and growth in the following decade would be slowed. So in 2000 Alaska could have virtually the same number of jobs as today, and by 2000 only about 20,000 additional jobs.

Fortunately, two forces could reduce the economic effects of the growing fiscal gap.

First, the more strength (job and income growth) there is in Alaska's basic industries—petroleum, mining,

Figure 5. Alaska Jobs Added Under Two Cases, 1990-2010



Source: ISER MAP model.

tourism, timber, fishing, and the federal government—and in the national economy, the more easily Alaska's private sector will be able to replace the jobs lost as public spending declines. But if economic growth in those sectors is less than the decline caused by fiscal drag, Alaska employment will not grow.

Second, how state officials deal with the fiscal gap can influence how much economic disruption Alaska faces. They have a number of options other than simple across-the-board cuts. More active options for closing the fiscal gap—including combinations of targeted spending cuts; cost containment; new taxes or other new revenues; and more efficient management of cash reserves—would reduce job loss and, perhaps more important, affect the timing of job losses. Below we describe the difference some state fiscal policies could make.

Effects of Fiscal Policy Choices

Here we look at the relative effects by the year 2000 of eight broad policy choices state officials have for reducing fiscal drag on Alaska's economy. There are of course other potential options, but these cover the wide range of possibilities and show how much difference each kind of policy could make.

We assume in this analysis that the fiscal gap opens in fiscal 1994. It could, as we discussed earlier, open sooner than that or later; if it did open at a different time, the effects would be shifted somewhat forward or further back, but would still be of the same magnitude.

Keep in mind that when we describe job or income "losses," we mean *losses relative to the level that would have existed, if there had been no fiscal gap.* That is our benchmark against which we measure the effects of the different options. The losses we describe result from slower economic growth caused by the fiscal gap. We *are not* describing losses from what exists today.

The option of across-the-board budget cuts represents our worst case (as measured by job loss): it shows what would happen by 2000 if state officials made no active policy choices and just cut the budget more and more as the fiscal gap widened. (This case also assumes that local governments receive proportionately less aid, and that they cut their own budgets in proportion to reduced state aid.) When we speak of jobs or income saved, we mean *saved relative to the worst case, across-the-board cuts.*

Between the benchmark case and the worst case are seven other choices that involve making some policy change to narrow the gap and then using across-the-board cuts to finish closing it.

In the next pages we describe each option and its effects on jobs, per capita disposable income (income after taxes), and per capita public spending by 2000, relative to the benchmark and the worst cases. Changes in numbers of jobs is a measure of the aggregate economic effects of any policy, while disposable income

Description of Policy Options

A. Across-the-Board Cuts: All general fund programs (except debt service on general obligation bonds) cut equal percentages to balance expenditures with revenues. Local government spending reduced commensurate with reduced state aid.

B. Reduce Employee Costs: State and local government wages and benefits frozen for two years; assume 5 percent annual inflation reduces labor costs 10 percent. Savings used to avoid layoffs.

C. Income Tax: Personal income tax re-imposed at rate consistent with former tax; the average household pays $1300 (in 1989 $) in 1995. Revenue used for general fund spending.

D. Increase Return on Permanent Fund: Real rate of return on Permanent Fund increased from 3 to 4 percent by shifting emphasis of investments to high-quality equity holdings; higher earnings used to boost dividends.

E. Use Dividends in General Fund: Permanent Fund dividends eliminated and that portion of earnings instead used for general fund spending.

F. Combine Sustainable Options B through E: Options B through E combined and revenues used for general fund spending. Increased earnings from Option D go into general fund.

G. No Inflation Proofing: Portion of Permanent Fund earnings formerly used for inflation-proofing shifted to general fund spending. Non-sustainable option because it shrinks value of Permanent Fund.

H. Combine Options Except E: Combine options B, C, D, and G and put revenues in general fund. Retain Permanent Fund dividend program. Non-sustainable combination because it shrinks value of Permanent Fund.

measures the purchasing power of the average resident and state spending per capita measures the value of state services each resident receives (assuming cost equates to value). Figure 6 on page 12 summarizes the effects of the options. (The box on page 10 describes the assumptions in each option.)

A. Across-the-Board Cuts: This case would, as the name suggests, close the fiscal gap by cutting all kinds of general fund spending (except debt service on state general obligation bonds) by equal percentages. (Local governments would cut their budgets to the extent state assistance fell.) This option would retain the Permanent Fund dividend program. By 2000, this option would require cutting almost all spending (other than for dividends) by 40 percent.

Job Effects: Closing the fiscal gap this way would mean 35,000 fewer Alaska jobs than there would have been by 2000 with no fiscal drag. That represents nearly 12 percent of the jobs that would have existed if there had been no fiscal gap. Thousands of Alaskans would leave to look for jobs elsewhere.

Roughly 7,000 state government jobs and 6,000 local government jobs that depend on state spending would be eliminated. But about two-thirds of the jobs lost would be in the private sector.

Slower economic growth would mean 23,000 fewer jobs in support industries by 2000. Support sectors (like wholesale and retail trade, service industries, and others) that depend on consumer spending and on government contracts and purchases would be hurt by the big drop in state spending. Basic industries (like fishing, petroleum, and mining) would not be directly affected but they would be vulnerable to increased taxes and other measures that could increase their costs as the state came under increasing pressure to raise more revenue. On the other hand, downward pressure on wages resulting from the slack economy could reduce their costs.

Income Effects: Across-the-board cuts would by 2000 also mean $1.6 billion (or 14 percent) less in total disposable personal income than would have existed without the fiscal gap. The disposable income of the average resident, however, would only be about $700 (4 percent) lower. Most of the loss in income represents the thousands of people who would leave Alaska if the economy was creating fewer jobs.

Public Spending Effects: Public spending per resident would drop $1,400, or 37 percent, under across-the-board cuts.

B. Reduce Employee Costs: There are many ways of reducing employee costs. As an illustration, this case would involve freezing wages and benefits of both state and local government employees for two years. (Carrying out this option would require the cooperation of Alaska's local governments, which rely heavily on state money.)

If inflation were 5 percent a year during that time, this option would effectively reduce labor costs by 10 percent. The resulting payroll savings could be used to avoid layoffs that would otherwise occur.

Job Effects: Job loss would be about 20 percent less than under straight across-the-board cuts. About 4,500 of the jobs saved would be public and 4,000 private.

Income Effects: The freeze would reduce disposable per capita income by about 10 percent more than across-the-board cuts, although the loss would be concentrated among public employees.

Public Spending Effects: Public spending per capita under this option would be close to the same as under across-the-board budget cuts, because it wouldn't add any new revenue. But because it would reduce labor costs by $100 million, it would effectively increase government purchasing power.

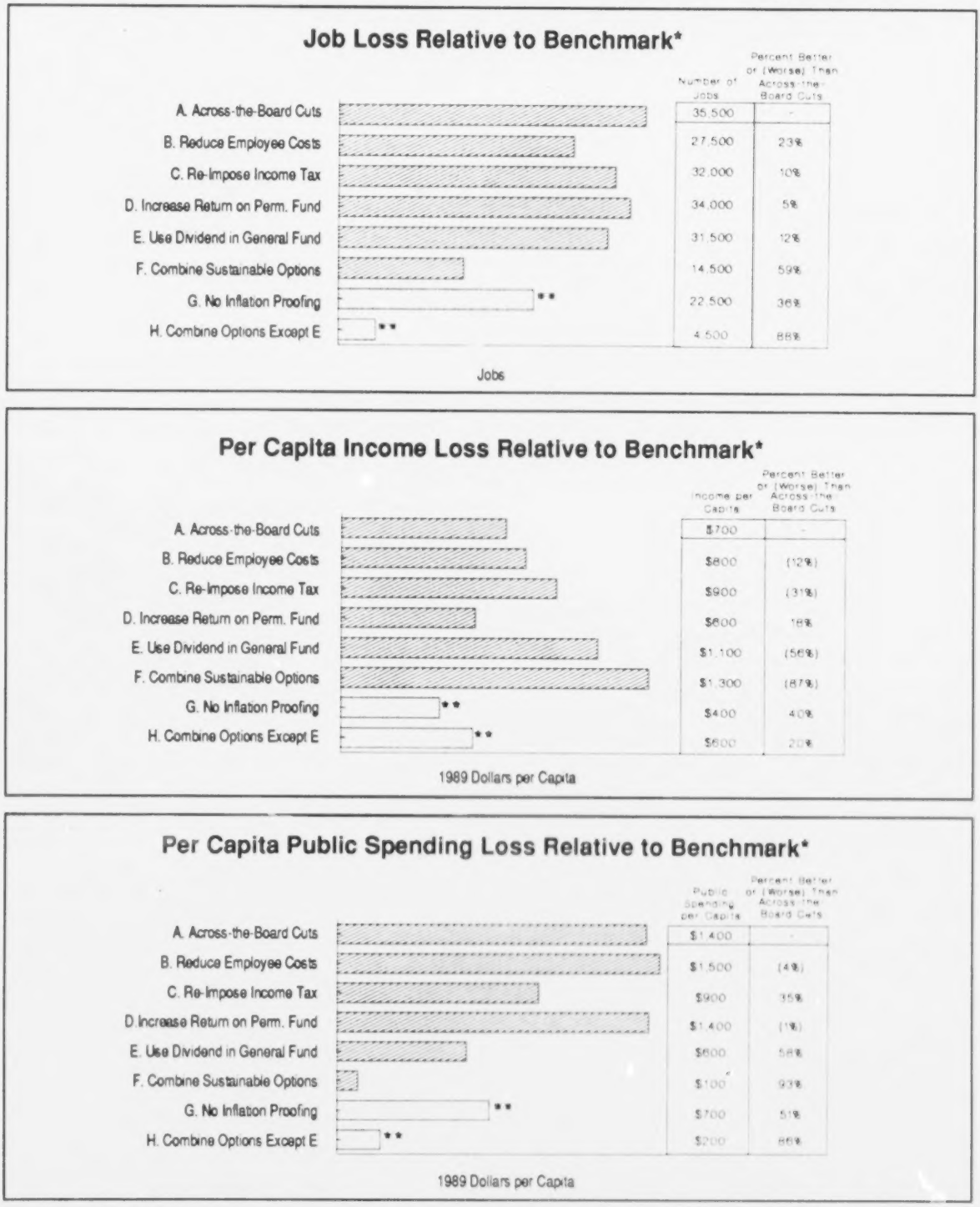
C. Personal Income Tax: Re-imposing a state income tax would cost Alaskans some of their disposable personal income but would save jobs. If state officials imposed an income tax similar to the one that existed before 1980, it could raise as much as $350 million annually (or $1,300 from the average household). That would fill about 30 percent of the fiscal gap in 2000.

Job Effects: Imposing an income tax would save about 10 percent, or 3,500, of the jobs that would be lost under across-the board cuts. Most of those would be public jobs, but about 500 would be private.

This option would save jobs for two reasons. First, non-residents and the federal government would pay about 28 cents of every dollar of state income tax collected so the loss in resident purchasing power would be only 72 cents for each dollar collected in taxes.

In addition, the income tax would save jobs because the government would spend all of it, and in ways that would create lots of jobs—hiring state workers, contracting with private firms, or supporting local government jobs. By contrast, if individual households had the money, they would save some of it, and the portion they spent would not create as many jobs as government spending. (As an illustration, the roughly $1.5 billion Alaskans spend for groceries and automobiles

Figure 6. Effects of Eight Fiscal Policy Options By 2000



**Loss as measured from what would have existed in 2000 if there were no fiscal gap.*

***These options are not sustainable.*

All figures estimated with ISER MAP econometric model.

each year directly supports about 9,000 jobs in the state, while the $2.5 billion annual state budget directly supports 32,000 state and local government jobs.)

Income Effects: By paying the income tax Alaskans would lose about 30 percent more disposable per capita income than under straight across-the-board cuts.

Public Spending Effects: An income tax in place could make up one-third of the drop in per capita public spending from the fiscal gap.

D. Increase Return on Permanent Fund: This is the only option that would save both jobs and income and could still be sustained over the long term. Fund managers could increase the rate of return on the Permanent Fund by shifting the investment portfolio toward high-quality equity holdings. In exchange for higher returns we'd have to accept greater year-to-year fluctuations in earnings. But over the long run this type of investment would boost the rate of return. We assume the state could increase the annual rate of return on the Permanent Fund 1 percent (boosting it from a 3 to a 4 percent real return). The extra returns would be used to increase Permanent Fund dividends, and thereby stimulate growth in the private economy.

This option by itself would have virtually no effect on the fiscal gap because it would not increase general fund revenues. But it would help reduce fiscal drag by increasing income and boosting growth in the private sector.

Job Effects: This option would save about 5 percent of the jobs that would be lost under across-the-board cuts. That would be about 1,500 private jobs.

Income Effects: Using the increased return on the Permanent Fund to pay larger dividends would save about 20 percent of per capita disposable income that would be lost under across-the-board cuts.

Public Spending Effects: This option wouldn't bring in any new general revenues, so public spending would drop by the same amount as under across-the-board cuts.

E. Use Permanent Fund Dividends: This option would eliminate the Permanent Fund dividend program and instead use that portion of Permanent Fund earnings to help close the fiscal gap. Like the income tax, it would save jobs at the expense of income.

Job Effects: Shifting dividend money to the general fund would save about 12 percent (4,500) of the jobs that would be lost under across-the-board cuts. Those would be mostly public jobs but also a handful of private ones.

This change would save jobs because, as with the income tax option, government spending creates more jobs than does private spending. Individuals use more of the dividend payments in ways that don't generate Alaska jobs—paying federal taxes, adding to savings, and taking vacations outside the state, for example.

Income Effects: Eliminating the dividend program would make the per capita income loss about 60 percent larger than under across-the-board cuts.

The main difference between raising revenues by eliminating the dividend program and by re-imposing an income tax would be in who bears the burden of supporting government. Small households with high incomes would probably rather see the dividend eliminated, because losing the dividend would cost them less than paying the tax. But large households with low incomes would probably rather see the income tax re-imposed—because they would pay less in tax than they would lose in dividend payments.

Public Spending Effects: This option would save about 60 percent of per capita public spending that would be lost under across-the-board cuts.

F. Combine Sustainable Options B Through E (reduce employee costs, income tax, higher Permanent Fund earnings shifted to general fund spending, and dividend program eliminated): Combining these four options would save more public and private jobs and narrow the fiscal gap more than would the four considered individually, for two reasons. First, each option that increases revenues would buy more jobs if combined with the option that reduces costs—the temporary compensation freeze. Second, increasing the earnings of the Permanent Fund and then using the increased earnings for general spending would buy more jobs than would paying it out as dividends.

Job Effects: This combination of options would save about 21,000, or 60 percent, of the jobs Alaska would lose under across-the-board cuts. About two-thirds of those jobs would be public.

Income Effects: This combination would nearly double the disposable per capita income loss, because it includes both imposing an income tax and eliminating the dividend program.

Public Spending Effects: This combination of options would keep per capita public spending in 2000 roughly where it would have been without the fiscal gap.

G. No Inflation Proofing: Under this choice state officials would take that portion of Permanent Fund earnings they now use to inflation-proof the fund and use it to help close the fiscal gap. In the near term, this looks like a good option: it would save both jobs and income. But the problem with this option is that—unlike the other options we've described so far—it can't sustain jobs and income over the long term. With the principal of the Permanent Fund no longer protected against inflation, its value and its ability to generate earnings would decline. If this policy were adopted, the real value of the fund would drop by about $500 million annually. The earnings would dwindle slowly, offering less protection against the fiscal gap each year even as the gap was increasing. Somewhere beyond the year 2010, they'd become so small they'd offer no protection from the fiscal gap.

Job Effects: In the short term this option would save about 13,000 jobs (8,000 private and 5,000 public), or 35 percent of all jobs that would be lost under across-the-board cuts.

Income Effects: This option would save nearly half the per capita income that would be lost under across-the-board cuts by 2000.

Public Spending Effects: The loss in public spending per capita under this option would be about half that under across-the-board cuts.

H. Combine All Options (B, C, D, and G) except leave Permanent Fund dividend program intact: At first glance, this combination of options looks good. It would create jobs and help reduce income losses, and would fill most of the fiscal gap in 2000.

Unfortunately, this combination would also suffer over the long term—because with the Permanent Fund no longer protected against inflation, its value would fall (as we discussed above). As the value of the Permanent Fund shrank, the benefits of this option would decline.

Job Effects: This combination by 2000 would save 31,000 jobs, or close to 90 percent of jobs that would be lost under across-the-board cuts. About 17,000 of those would be private jobs and 14,000 public.

Income Effects: This option would save about one-fifth of per capita disposable income that would be lost under across-the-board cuts.

Public Spending Effects: This option would keep per capita public spending in 2000 close to as high as it would have been without the fiscal gap.

Conclusions

The big role state spending plays in Alaska's economy makes it inevitable that economic growth will slow as state income from petroleum revenue declines and state spending drops. How state officials close the fiscal gap will have major effects not only on future state services but on employment and income growth in Alaska.

This paper makes it clear that state officials can influence economic growth through their choices of fiscal policies. But each policy we examined involves some trade-offs. By carefully examining their options and packaging some combination of policies, state officials could minimize economic disruption as state spending falls.

The first choices before policymakers are how to use spending cuts, cost savings, tax and other revenue increases, and cash reserves in balancing the budget. Those choices present two major trade-offs for Alaska's economy: choices that would save jobs generally do so at the expense of personal income, and choices that save income do so at the expense of jobs.

State officials will also need to examine long-term as well as short-term effects of their choices. Choices that may look good for the next few years might not serve Alaska well in the next decade.

And once they've decided how much to cut from the budget, policymakers will need to consider how to distribute those cuts. Equal spending cuts throughout the state would be hardest on rural areas that depend most on state money. But cuts that attempt to protect the most dependent areas would require bigger cuts in urban areas.

Some broad points officials may want to consider in making their decisions are:

- State officials have options that could supplement across-the-board budget cuts and save anywhere from 2,000 to 20,000 public and private jobs by the year 2000. But if state officials close the gap entirely through budget cuts, by the end of the decade Alaska could lose more than 35,000 jobs that it would have had without the fiscal gap. That would mean virtually no job growth over the next decade.

- Closing the fiscal gap entirely through budget cuts would cost Alaska large numbers of both public and private jobs. State money not only supports about 19,000 state government jobs and 12,500 local government jobs but also 50,000 private jobs.

• State spending creates a large number of jobs because so much of each dollar spent directly supports jobs. Education is a good example of a government activity where the majority of spending goes for jobs. By contrast, a larger part of private spending typically is for commodities—commodities manufactured outside of Alaska. So areas outside Alaska get the job benefits of spending for commodities.

• Fiscal choices that save jobs at the expense of income—such as re-imposing a personal income tax or eliminating the Permanent Fund dividend program and shifting the money to general spending—could reduce per capita disposable personal income 2 to 5 percent by the year 2000, but save in the neighborhood of 4,000 jobs.

• Policies that save jobs are more likely to keep people in Alaska than are policies that preserve income. When people lose their jobs they're often forced to look for new jobs outside Alaska. But when they keep their jobs but lose some income they're more likely to stay and spend less.

• Increasing the annual rate of return on the Permanent Fund by 1 percent is an exception to the general rule that choices save either jobs or income but not both. It would be a win-win proposition for the State of Alaska, saving both jobs and income at no expense to Alaskans. If the increased rate of return were used to increase Permanent Fund dividends it would help save private jobs and income. If it were used to bolster general fund spending it would help save public and private jobs and income.

• Shifting the portion of Permanent Fund earnings that currently goes to inflation-proof the Permanent Fund to general fund spending would save jobs and income in the short term. But that would be an unwise choice for the long run. When the Permanent Fund was no longer protected from inflation, its value and its earning power would dwindle—contributing to a fiscal gap in the next century.

• Cost-saving policies that do not add revenues to state coffers could still ease the economic effects of across-the-board cuts by stretching existing revenues.

• Combining an option that raises revenues with one that reduces costs would carry an extra dividend: the combination saves more jobs and income than we would expect from just looking at the individual effects of each. For example, new tax revenues would buy more jobs if the cost of each job were 10 percent less.

• Some regions stand to be hurt proportionately much more than others by reduced state spending. Even though all regions rely greatly on state government money, rural regions where the private sector is very small are particularly vulnerable to budget cuts. ISER estimates, for example, that more than 41 percent of all economic activity in the rural interior region can be attributed to state spending, as compared with about 30 percent in the urban railbelt region.

• Communities that have their own tax capacities and authorities will have to raise substantially more money of their own or face reduced services as state aid falls. Even though state aid to local governments dropped in the late 1980s, it still supports nearly half of all local government jobs, including school district jobs, throughout Alaska. And state aid makes up as much as two-thirds of local government revenues in some rural areas.

• Among the first things to go as state spending falls will be capital aid—and those regions that can't finance projects themselves are likely to see little construction as the fiscal gap grows. Capital budgets already dropped off sharply in the late 1980s, but in the last part of the decade the state still spent $1,150 per Alaskan each year and roughly twice that much per resident of the rural interior and northern regions.

Estimating Impacts of State Government Spending

We use the notion of the purchasing power of the state government budget to estimate the state and regional economic impacts of state spending. The state government buys jobs and distributes income to households and businesses when it puts money "on the street." The money that hits the street recirculates through the economy, producing more jobs and income (the multiplier effect, as described on page 3) until it eventually leaks out of the Alaska economy. Our estimate is based on employment and income in calendar year 1988 and state spending in fiscal year 1989. Estimates of the the impact of government spending on the economy will change as the relative sizes of the public and private sectors change.

We estimated job creation from FY 1989 state spending in the following categories (in order of importance)—state wages and salaries, local government wages and salaries, Permanent Fund dividends, contracts, other income transfers to individuals, capital spending, state employee benefits, local government purchase of goods and services, local government employee benefits, state purchase of commodities, and debt service. The calculation includes all spending originating from either the state general fund or the Permanent Fund, but it excludes impacts of off-budget items such as the Alaska Railroad, revenue bond activity, the income value of subsidies from loans made on terms below market rates, and unemployment insurance payments. In addition we estimated and netted out interagency transactions (reimbursable services agreements) within state government to avoid the double counting that would result from including purchases of services of one government department by another.

The economic impacts of public employee benefits and general obligation bonded debt payments could be treated as occurring either when the economic activity associated with those parts of the budget occurred or when the funds were expended. We attributed the economic impacts of benefits when they accrued to employee accounts—for every dollar of benefits accrued a dollar of payments in the form of medical payments and retiree payments "hit the street" in the same year. We used the principal portion of general obligation bonded debt repayment (assumed to be spent entirely on capital construction) to calculate the economic impact of debt payments. Using this method smoothes the impact of capital construction financed by bonded debt over the years when the bonds are being repaid.

Estimating the regional impacts of state spending requires allocating spending by category to each region. We based these allocations on a combination of actual expenditures for some categories and estimates for others. Income-type payments (like those under Medicare) and construction spending can be allocated either where the expenditure occurs, or where the beneficiary resides. To estimate economic impacts we use the former allocation criterion. The multiplier effects of expenditures will differ by region, with the urban areas receiving some of the economic activity associated with expenditures made in rural areas.

The economic effects of changes in government expenditures were estimated with the ISER state econometric model, which measures both the short- and long-term implications of changes in spending policy. In particular, a policy change that puts the economy on a higher growth path will create an increasing impact over time. For example, the receipts from a personal income tax would increase each year if annual economic growth were increasing personal income over time.

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